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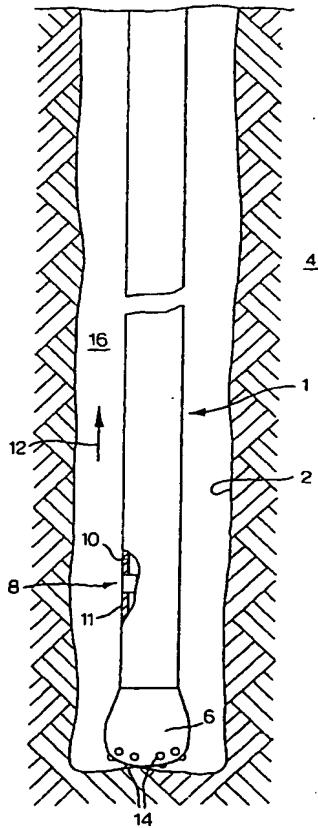
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(54) Title: SYSTEM FOR DETECTING GAS IN A WELLBORE DURING DRILLING

(57) Abstract: A system is provided for detecting the presence of formation gas in a stream of drilling fluid flowing through a wellbore during drilling of the wellbore. The system comprises at least one sensor chamber connectable to a drill string for drilling the wellbore, each sensor chamber containing a volume of a selected gas and having a membrane wall which allows passage of formation gas from the stream of drilling fluid into the sensor chamber. The sensor is arranged to detect a change of a selected characteristic of said volume of gas due to passage of formation gas from the stream of drilling fluid via the membrane wall into the sensor chamber.



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